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CONSERVATION FARMING--THE KEY TO FUTURE WILDLIFE CROPS

Farmers and ranchers in the United States hold the key to successful wildlife crops in the years ahead.

This is true because more than 85 percent of our potential hunting land is in private ownership or control.

It is true because the bulk of our hunting is provided by rabbits, quail, pheasants, and other kinds of wildlife produced on farms and ranches.

Thus, our wildlife crop is produced and harvested, for the most part, on lands that are used for cultivation, livestock, or wood products. Only a small amount of land, mainly in publicly owned refuges and shooting grounds, is used exclusively for wildlife.

And since wildlife is produced on lands used primarily for other purposes, the success of wildlife production in the future depends on how farmers and ranchers use and treat their land.

Soil Conservation Practices Build Wildlife Habitat

In the past 25 years, farmers and ranchers have made great progress in a nationwide soil and water conservation program. A million and a half are cooperators with soil conservation districts. These farmers and ranchers follow well-rounded conservation plans which often contain specific wildlife-improvement measures. Most farmers who are not district cooperators are carrying out one or more conservation practices that benefit wildlife, often with cost-sharing assistance from the Agricultural Conservation Program Service of USDA.

Fortunately, almost every practice that helps protect and improve soil and conserves water also improves food and cover for wildlife. Improved grass on rangeland and in pastures, crop stubble, grass waterways, windbreaks or shelterbelts, and other of the "vegetative" practices which aid wildlife as directly, are the foundation measures for soil and water conservation.

And, when land use and vegetative measures alone are not adequate to control erosion, small dams and other supplementary structures may have to be built. These, in turn, usually provide water and cover for wildlife.

The basis of a conservation plan on a farm or ranch is a land-capability map. This map helps a farmer or rancher know his land better. It helps him decide what is the safest and best use for each piece of land. It tells him which land is best suited for crops, which is best for pastures, or woods, and which would be best reserved for wildlife.

The Soil Conservation Service, which provides technical help to farmers and ranchers in soil conservation districts, regards wildlife as an important product of the land. It helps and encourages farmers and ranchers to recognize that wildlife, like other crops, must be

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"Level ditching" is a marsh-management practice being carried out in many soil conservation districts. These ditches increase the carrying capacity of the marsh by providing more food plants and open water.

intentionally produced and managed. It shows them how wildlife improvement fits logically into a soil and water conservation plan.

Wildlife Improvement in Conservation Plans

Among the soil and water conservation practices designed specifically for wildlife-habitat improvement are marsh management, odd-area management, and the planting of wildlife borders.

It has been estimated that there are about 75,000,000 acres of wetlands where, for various reasons, agricultural drainage is not desirable or feasible. Some of this wetland is marshland of a type suitable for the production of fur bearers and migratory waterfowl. SCS is providing technical assistance to farmers in managing these and other wetlands and improving their wildlife production. Practices being applied include water-level control, controlled burning, seeding and planting, and regulating livestock grazing--all designed to control water and vegetation for best wildlife habitat.

Odd areas on many farms and ranches are being managed and improved as wildlife land. These areas include rocky spots, blowouts, sinkholes, borrow pits, abandoned roads, small areas isolated by ditches, streams and gullies, and similar pieces of land not suitable for crops or pasture. Such areas are usually fenced to protect them from grazing. Burning is controlled and, when necessary, trees, shrubs, and other plants that provide wildlife food and cover are planted. Although odd areas

are usually small, they occur on many farms and ranches and total about 10 million acres for the country as a whole.

Strips of land between cultivated fields and woodlands are often unproductive and badly eroded. Shade and competition from the trees make it difficult to raise cultivated crops on such woodland borders but they can be made productive of wildlife--particularly of bobwhite quail in the Southeast. After considerable trial, SCS has found that the seeds of bicolor lespedeza are a high quality quail food and that this plant does well on these border sites. The shrubby bicolor is planted adjacent to the trees and the low-growing sericea lespedeza or various adapted grasses are planted next to the cultivated land. This combination of plants protects the field border against erosion and makes it a productive wildlife area.

During 1955, SCS provided technical assistance for 455,000 acres of wildlife-area improvement. The total land improved for wildlife at the end of that year was 3,470,000 acres.

Conservation Measures of Special Wildlife Value

The "living fence" of multiflora rose is becoming common in many regions and is an important influence on populations of small game. These fences are stockproof and are often used to separate pastures from cultivated fields. They are especially adapted to sites where the fence line must be irregular, as around gullies and along streambanks. Multiflora



Contour living fences of multiflora rose conserve both soil and wildlife. Their thorny, thick growing canes furnish cover for wildlife, and birds eat their fruit.

rose fences provide excellent wildlife cover and are practical and inexpensive.

Windbreaks of trees and shrubs are valued additions to farms and ranches not only in the Great Plains, but in many other places where farmsteads, crops, and livestock must be protected from damaging winds. The 25,000 miles of windbreaks now on the land make a major contribution to wildlife habitat on farms and ranches. These lanes of woody vegetation can be very important for wildlife as well as for erosion control, especially since special attention is given to the inclusion of trees and shrubs that provide food and cover.

Ponds are being built by farmers and ranchers at the rate of about 75,000 a year, and more than 715,000 of them have been constructed by soil conservation district cooperators. These ponds have impressive values for wildlife and recreation. A study of 91 ponds in Missouri revealed that about 90 species of birds and 10 species of mammals lived in the immediate vicinity. Cottontail rabbits were found at 85 percent of the ponds, doves at 65 percent, muskrats at 63 percent, and bobwhite quail at 55 percent.

A study made in South Dakota showed that in the 39,000 square miles west of the Missouri River there were 40,000 manmade impoundments which contained about 100,000 acres of water.



Shelterbelts or windbreaks include shrubs that bear valuable wildlife food. The windbreak itself provides excellent cover for songbirds and small game.



Farm ponds provide added water, fish, and waterfowl. When fenced like this, small game can get a drink without being exposed to predators. Fencing helps keep sediment out of the pond.

In one county, it was found that ponds averaged from 5 to 6 breeding pairs of ducks per pond, producing more than 20 young ducks to the flight stage per pond. Thus, these manmade impoundments in western South Dakota are responsible for a new breeding population of ducks. These and other examples demonstrate that farm and ranch ponds provide important wildlife habitat, often where there were little or no water areas before.

Farm ponds--usually built to provide water for livestock, irrigation, fire protection, or other farm purposes--are often used for producing fish and add greatly to recreational opportunities in each community. Technical assistance was provided by SCS for 56,000 such fish ponds in 1955. From each of them the land owner can expect to harvest by hook-and-line fishing from 100 to 300 pounds of fish per acre each year.

Farmer-Rancher Decisions Affect Wildlife Increase

An important fact, often overlooked or discredited, is that the production of fish and game is something which the private land owner or operator can accept or reject. By his decisions, he can effectively aid or seriously hinder the increase of wildlife that uses the plants and water on his farm or ranch land.

Because the farmer or rancher must first of all look to his land for a livelihood, his land use decisions may, in fact, be adverse to wildlife increase. And because sportsmen and other wildlife enthusiasts are primarily interested in maximum wildlife crops, these two interests may clash unless effective cooperation and understanding is obtained.

A good example of this is found in 86 counties of North Dakota,



Potholes like that in the top picture, which have permanent water, are of major importance to waterfowl. Farmers are encouraged to preserve and improve such waterfowl-nesting grounds. Much of the drainage of farmland in the pothole region, however, has been to eliminate low spots, like those shown in the bottom picture, that collect and hold water for a short time, greatly interfering with farming operations until the spot dries up.

South Dakota, and Minnesota which comprise not only an important agricultural region but also an important breeding area for waterfowl.

In this area there are a great number of natural depressions which catch and hold water. Known as potholes, these wet areas range from a fraction of an acre to several acres in size. Some contain water the year around. Many, however, are wet for only a few weeks each year and are usually plowed and farmed during the drier months of the year or throughout entire dry years.

Farm Drainage in the "Pothole" Region

Farmers frequently wish to drain temporarily or seasonally wet soils as a means of eliminating nuisance areas that interfere with efficient farming operations. Drainage of this type sometimes makes possible a desirable shift in land use and more effective use of soils best suited to crops.

Under these conditions, and when drainage is otherwise a desirable part of the soil and water conservation plan, the Soil Conservation Service provides assistance for drainage just as it does for some 30 other soil- and water-management practices applicable in the pothole region.

It does so, however, only after pointing out wildlife use as a desirable alternative use of wetlands, if such is the case. It encourages soil conservation districts and other sponsors of watershed projects, as well as individual farmers, to consider fully all phases of soil and water problems, including related wildlife values.

Under a policy established early in 1956, the Soil Conservation Service does not provide drainage assistance when the primary object of such drainage is to bring new land into production. The Agricultural Conservation Program operates under a similar policy.

Soil conservation districts cover all or part of 78 of the 86 pothole counties. These districts include a total of nearly 51 million acres of land. On farms of district cooperators, a total to date of slightly more than one-half million acres, or about 1 percent of all land in districts in the pothole counties, has been drained with SCS technical assistance.

By far the largest part of this--about two-thirds of it--was drainage of land that had too high a water table within the soil root zone, but with no water standing on the surface.

In a second category, drainage benefited some 188,000 acres of land that is usually farmed because it is dry in many years or goes dry early in the season.

In the 20 years districts have been in operation, some 14,000 farm ponds have been built, adding at least 15,000 acres of permanent water that provides waterfowl habitat and serves other agricultural purposes in the pothole region.

SCS Assistance on Wildlife Problems

In addition to farm ponds, a great amount and variety of soil and water conservation practices are being applied at a rapid rate on land in the pothole counties. Furthermore, SCS has assisted in specific



Leaving a good stubble on the ground after harvest not only checks erosion but also gives wildlife a break.

wildlife-habitat improvement on 83,500 acres in this area. This includes direct attention to increased production of waterfowl and to upland game and furbearers. It comes particularly through water control in marshes and their protection from burning and grazing. It also involves the planting and protection of odd areas.

Three full-time SCS biologists have been assigned to work in the three States where most of the potholes occur. They are helping to develop new conservation measures that benefit and improve habitat for waterfowl, furbearers, and upland game.

In other areas of the country, land clearing, clean tillage, burning of crop residues, and other common farming practices are sometimes harmful to wildlife. Prohibition of these practices is not the answer. Instead, farmers must be helped to appreciate the need for and values of protecting and improving wildlife habitat as an integral part of a total soil and water conservation plan for each farm or ranch. At the same time, sportsmen need to gain a better appreciation of the farmer's problems and seek ways to encourage and help him produce larger crops of wildlife.